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EXAMINER
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BAUER, SCOTT ALLEN

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 01/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/783,966	<b>Applicant(s)</b> AROMIN, VICTOR V.	
	<b>Examiner</b> Scott Bauer	<b>Art Unit</b> 2836	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>02/20/2004</u> . | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION*****Claim Objections***

1. Claim 2 is objected to because of the following informalities: Claim 2 contains two minor grammatical errors. The examiner suggests removal of the word "is" in the phrase "wherein said nuisance tripping resistor *is* includes a..." in Claim 2 line 1, and inclusion of the word --of-- in the phrase "one --*of*-- its terminals being..." found in Claim 2 line 2. Appropriate correction is required.

***Double Patenting***

2. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

3. Claims 1-25 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of Claims 1-25 of copending Application No. 10/886,296. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gershen et al. (US 5,402,298) in view of Legatti (US 4,931,894).

6. With regard to Claim 1, Gershen et al. in Fig. 3 teaches a shock hazard protection system for use with a power cable (110 & 120), said power cable connecting a power source with a load, said power cable comprising a power line (110), and a neutral line (120) the fireguard circuit comprising:

(a) A circuit breaker comprising a first switch (400) located in one of the lines between the power source and the load, said switch having a first position in which the power source in its associated line is connected to the load and a second position in which the power source in its associated line is not connected to the load.

(b) A circuit opening device (L) for setting said switch in either its first position or its second position, said circuit opening device being operable in either a first state or a second state, said circuit opening device setting the switch in its first position when in its first state and said circuit opening device setting the switch in its second position when in its second state.

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(c) A first silicon controlled rectifier (SCR) for detecting the presence of an arcing condition between the two lines, the first SCR setting the circuit opening device at its second state upon detecting the presence of an arcing condition between the two lines, the first SCR comprising an anode, a cathode and a gate.

(d) A nuisance-tripping resistor (R2) connected to the first SCR to reduce the likelihood of nuisance tripping in the first SCR.

Gershen et al. does not teach that the device is used to protect against a ground fault between one of the power lines and a metal sheath surrounding the two power lines.

Legatti, in Figure 1, teaches a GFCI circuit with arcing protection wherein a circuit is used to protect against ground faults between one of the power lines (17 & 19) and a metal sheath (39), surrounding the power lines.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gershen et al. with Legatti, by using the protection circuit taught by Gershen et al. to protect the sheathed power supply lines taught by Legatti, for the purpose of protecting a user from shock should the power line short onto the metal sheath.

7. With regard to Claim 2, Gershen et al. in view of Legatti discloses the fireguard circuit of Claim 1. Gershen et al., in figure 3, further discloses that the nuisance tripping resistor (R2) is includes a pair of terminals, one its terminals being connected to the gate of said first SCR and the other of its terminals being connected to the cathode of said first SCR.

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8. With regard to Claim 3, Gershen et al. in view of Legatti discloses the fireguard circuit of Claim 1. Gershen et al., in figure. 3, further discloses that the power connections for the circuit opening device (L) and the first SCR are derived from the power (110) and neutral lines (120) at the load.

9. Claims 4-7, 9-11, 21, 22, 24 & 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gershen et al. in view of Legatti as applied to claim 1 above, and further in view of McDonald et al (US 5,661,623).

10. With regard to Claim 4, Gershen et al. in view of Legatti teaches the fireguard circuit of Claim1.

Gershen et al. does not teach that power connections for the circuit opening device and the first SCR are derived from the power and neutral lines at the power source.

McDonald et al., in Figure 7, teaches a GFCI plug wherein the power connections for a circuit opening device (180) and a first SCR (236) are derived from the power and neutral lines at the power source.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gershen et al. in view of Legatti with McDonald, by connecting the circuit opening device (L) taught by Gershen et al., to the power source side of the circuit breakers (S1 & S2), for the purpose of allowing the circuit opening device (L) to stay energized during a ground fault, thus protecting the load from excessive current until the ground fault is removed.

11. With regard to Claim 5, Gershen et al. in view of Legatti discloses a fireguard circuit for use with a power cable, the power cable connecting a power source with a load, said power cable comprising a power line, a neutral line and a metal sheath which surrounds the power line and the neutral line, said fireguard circuit comprising:

(a) A circuit breaker comprising a first switch (400) located in one of said lines between the power source and the load, said switch having a first position in which the power source in its associated line is connected to the load and a second position in which the power source in its associated line is not connected to the load.

(b) A circuit opening device (L) for setting said switch in either its first position or its second position, said circuit opening device being operable in either a first state or a second state, said circuit opening device setting said switch in its first position when in its first state and said circuit opening device setting said switch in its second position when in its second state.

(c) a first silicon controlled rectifier (SCR) for detecting the presence of an arcing condition between one of said lines and the metal sheath, said first SCR setting said circuit opening device at its second state upon detecting the presence of an arcing condition between one of said lines and the metal sheath, said first SCR comprising an anode, a cathode and a gate.

McDonald et al., in figure 7, further discloses that an indicator circuit (206, 208 & 210) is connected to the power (56) and neutral (60) lines at a load, the

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indicator circuit providing an indication as to whether power is being applied to said load (column 11 lines 21-31).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gershen et al. in view of Legatti and further in view of McDonald et al. with the indicator circuit of McDonald et al., by Placing the indicator circuit taught by McDonald et al. across the power and natural lines taught by Gershen et al., for the purpose of providing a visible indication that the relay contacts are closed (McDonald et al. column 11 lines 24-28).

12. With regard to Claims 6 & 7, Gershen et al. in view of Legatti and further in view of McDonald et al. discloses the fireguard circuit of Claim 5. McDonald further discloses that the indicator circuit comprises a light emitting diode (208), a current limiting resistor (210) and a protection diode (206), and that they are all connected in series.

13. With regard to Claim 9, Gershen et al. in view of Legatti and further in view of McDonald et al., discloses the fireguard circuit of Claim 5. McDonald et al. further discloses that the circuit further comprising a test circuit (258 & 34) connected to said power line to test whether said fireguard circuit is functioning properly (column 4, lines 63-67 & column 5, line 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gershen et al. in view of Legatti



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and further in view of McDonald et al. with the test circuit taught by McDonald et al., by inserting a test circuit between the power and neutral lines taught by Gershen et al. in view of Legatti and further in view of McDonald et al., for the purpose of indicating to the user that the protection circuit is defective and requires repair or replacement (McDonald et al. column 14 lines 1-3).

14. With regard to Claims 10 & 11, Gershen et al. in view of Legatti and further in view of McDonald et al. discloses the fireguard circuit of Claim 5. Gershen et al. further discloses that the power connections for the circuit opening device and the first SCR are derived from the power and neutral lines at the load, and McDonald et al. further discloses that the power connections can instead be connected at the power source.

15. With regard to Claim 21, Gershen et al. in view of Legatti and further in view of McDonald et al. discloses a fireguard circuit for use with a power cable, said power cable connecting a power source with a load, said power cable comprising a power line, a neutral line and a metal sheath which surrounds the power line and the neutral line, said fireguard circuit comprising:

(a) A circuit breaker (400) comprising a first switch located in one of said lines between the power source and the load, said switch having a first position in which the power source in its associated line is connected to the load and a second position in which the power source in its associated line is not connected to the load.

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(b) A circuit opening device (L) for setting said switch in either its first position or its second position, said circuit opening device being operable in either a first state or a second state, said circuit opening device setting said switch in its first position when in its first state and said circuit opening device setting said switch in its second position when in its second state.

(c) A first silicon controlled rectifier (SCR) for detecting the presence of an arcing condition between one of said lines and the metal sheath, said first SCR setting said circuit opening device at its second state upon detecting the presence of an arcing condition between one of said lines and the metal sheath, said first SCR comprising an anode, a cathode and a gate.

McDonald et al. in Figure 7, further teaches a diode bridge (214) for detecting the presence of an arcing condition, setting the circuit opening device at its second state upon detecting the presence of an arcing condition between the two lines, wherein the diode bridge sets the current opening device (L) at its second state upon detecting the presence of an arcing condition between the two lines.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gershen et al. in view of Legatti and further in view of McDonald et al. with the diode bridge taught by McDonald et al., by placing the diode bridge taught by McDonald et al. using the diode bridge taught by McDonald et al. to set the circuit opening device taught by Gershen et al. in view of Legatti and further in view of McDonald et al., in its second state, for the purpose of allowing the circuit to be used in an AC system.

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16. With regard to Claim 22, Gershen et al. in view of Legatti and further in view of McDonald et al. discloses the fireguard circuit of Claim 21. McDonald et al. further discloses that the circuit opening device (180) is connected directly to the SCR.

17. With regard to Claims 24 & 25, Gershen et al. in view of Legatti and further in view of McDonald et al. discloses the fireguard circuit of Claim 21. Gershen et al. further discloses that the power connections for the circuit opening device and the first SCR and the diode bridge are derived from the power and neutral lines at the load, and McDonald et al. further discloses that the power connections can instead be connected at the power source.

18. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gershen et al. in view of Legatti and further in view of McDonald et al. as applied to Claim 6 above, and further in view of Williamson (US 4,849,734).

19. With regard to Claim 8, Gershen et al. in view of Legatti and further in view of McDonald et al. teaches the fireguard circuit of Claim 6.

Gershen et al. in view of Legatti and further in view of McDonald et al. does not teach the indicator circuit wherein the LED and the current limiting resistor are connected in series and said LED and said protection diode are connected in parallel.

Williamson, in Figure 4, teaches a self-diagnostic circuit for alarm systems wherein an SCR detects the polarity of a power line. An indicator circuit comprises an LED (LED1) coupled in series to a resistor (R), with a protective diode (D), in parallel with the LED.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gershen et al. in view of Legatti and further in view of McDonald et al. with Williamson, by placing the diode in parallel with the LED instead of in series with the LED as taught by McDonald, for the purpose of removing the voltage drop across the diode thus allowing the LED to shine brighter.

20. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gershen et al. in view of Legatti and further in view of Fai (US 4,860,147).

21. With regard to Claim 12, Gershen et al. in view of Legatti teaches a fireguard circuit for use with a power cable, said power cable connecting a power source with a load, said power cable comprising a power line, a neutral line and a metal sheath which surrounds the power line and the neutral line, said fireguard circuit comprising:

(a) A circuit breaker comprising a first switch (400) located in one of said lines between the power source and the load, said switch having a first position in which the power source in its associated line is connected to the load and a

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second position in which the power source in its associated line is not connected to the load,

(b) A circuit opening device (L) for setting said switch in either its first position or its second position, said circuit opening device being operable in either a first state or a second state, said circuit opening device setting said switch in its first position when in its first state and said circuit opening device setting said switch in its second position when in its second state.

(c) A first silicon controlled rectifier (SCR) for detecting the presence of an arcing condition between one of said lines and the metal sheath, said first SCR setting said circuit opening device at its second state upon detecting the presence of an arcing condition between one of said lines and the metal sheath, said first SCR comprising an anode, a cathode and a gate.

Gershen et al., in figure 4 further discloses that a zener diode (Z) is connected to an SCR to reduce the peak voltage at which the circuit protection biases (column 6 lines 64-68).

Gershen et al. in view of Legatti does not teach the fireguard circuit comprises a second silicon controlled rectifier (SCR) for detecting the presence of an arcing condition between the other of said lines and the metal sheath, said second SCR setting said circuit opening device at its second state upon detecting the presence of an arcing condition between the other of said lines and the metal sheath, said second SCR comprising an anode, a cathode and a gate.

Fai in Figure 1, teaches a shock-protected domestic electrical apparatus, wherein a first and second silicon controlled rectifier (SCR) detect the presence

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of an arcing condition between the power lines (28 a,b,c) of an appliance (10), the first and second SCRs set the circuit opening device to its second state upon detecting the presence of an arcing condition between the power lines, the first and second SCR comprising an anode, a cathode and a gate (column 2 lines 15-34).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gershen et al. in view of Legatti with Fai, by duplicating the protective circuit (300) of Gershen et al. in view of Legatti and using a separate protective circuit, to provide protection between the sheath and each line individually as taught by Fai, for the purpose of providing greater safety by opening the circuit when a fault appears near the main line or when the fault appears near the neutral line, as taught by Fai.

22. With regard to Claim 13, Gershen et al. in view of Legatti and further in view of Fai discloses the fireguard circuit of Claim 12. Gershen et al. further discloses that a zener diode (Z) is connected to the gate of an SCR.

23. With regard to Claim 14, Gershen et al. in view of Legatti and further in view of Fai discloses the fireguard circuit of Claim 12. Gershen et al. further discloses that the power connections for the circuit-opening device and the SCR are derived from the power and neutral lines at the load.

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24. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gershen et al. (US 5,402,298) in view of Legatti (US 4,931,984) and further in view of Fai (US 4,860,147) as applied to claim 12 above, and further in view of McDonald et al. (US 5,661,623)

25. With regard to Claim 15, Gershen et al. in view of Legatti and further in view of Fai teaches the fireguard circuit of Claim 12.

Gershen et al. in view of Legatti and further in view of Fai does not teach that the power connections for the circuit opening device and the first and second SCRs are derived from the power and neutral lines at the power source.

McDonald, in Figure 7, teaches that power connections for a circuit opening device and an SCR are derived from power and neutral lines at the power source.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gershen et al. in view of Legatti and further in view of Fai with McDonald et al., as discussed above in Claim 4.

26. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gershen et al. in view of Legatti and further in view of Fai as applied to Claim 12 above, and further in view of McGinnis (US 4,209,817).

27. With regard to Claim 16, Gershen et al. in view of Legatti and further in view of Fai teaches a fireguard circuit for use with a power cable, said power

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cable connecting a power source with a load, said power cable comprising a power line, a neutral line and a metal sheath which surrounds the power line and the neutral line, said fireguard circuit comprising:

(a) A circuit breaker comprising a first switch (400) located in one of said lines between the power source and the load, said switch having a first position in which the power source in its associated line is connected to the load and a second position in which the power source in its associated line is not connected to the load.

(b) A circuit opening device (L) for setting said switch in either its first position or its second position, said circuit opening device being operable in either a first state or a second state, said circuit opening device setting said switch in its first position when in its first state and said circuit opening device setting said switch in its second position when in its second state.

(c) A first silicon controlled rectifier (Gershen et al. Fig. 3, SCR) for detecting the presence of an arcing condition between one of said lines and the metal sheath, said first SCR setting said circuit opening device at its second state upon detecting the presence of an arcing condition between one of said lines and the metal sheath, said first SCR comprising an anode, a cathode and a gate.

(d) A second silicon controlled rectifier (Fai Fig. 1, SCR) for detecting the presence of an arcing condition between the other of said lines and the metal sheath, said second SCR setting said circuit opening device at its second state upon detecting the presence of an arcing condition between the other of said



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lines and the metal sheath, said second SCR comprising an anode, a cathode and a gate.

Gershen et al. in view of Legatti and further in view of Fai does not teach that a transistor circuit is connected to the second SCR to reduce the peak voltage at which the metal sheath biases.

McGinnis, in Figure 4, teaches a circuit breaker having an electronic fault sensing and trip initiating unit wherein a transistor 151 is connected to the gate of an SCR (161) to reduce the peak voltage at which the SCR biases (column 12 lines 51-60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gershen et al. in view of Legatti and further in view of Fai with McGinnis, by providing the transistor taught by McGinnis at the gate of the second SCR as taught by Gershen et al. in view of Legatti and further in view of Fai, for the purpose of lowering the trip voltage of the SCR as taught by McGinnis.

28. With regard to Claim 17, Gershen et al. in view of Legatti and further in view of Fai and McGinnis discloses the fireguard circuit of Claim 16. McGinnis further discloses that the transistor circuit comprises a transistor (151), first, second and third resistors (145, 146 & 236), a capacitor (149) and a diode (160) (column 12 lines 51-60).

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29. With regard to Claim 18, Gershen et al. in view of Legatti and further in view of Fai and McGinnis discloses the fireguard circuit of Claim 16. McGinnis, in Figure 4, further discloses that the transistor (151) is connected to the gate of the SCR (160).

30. With regard to Claim 19, Gershen et al. in view of Legatti and further in view of Fai and McGinnis discloses the fireguard circuit of Claim 19. Gershen et al. further discloses that the power connections for the circuit-opening device and the first and second SCRs are derived from said power and neutral lines at the load.

31. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gershen et al. in view of Legatti and further in view of Fai and McGinnis as applied to claim 16 above, and further in view of McDonald et al.

32. With regard to Claim 20, Gershen et al. in view of Legatti and further in view of Fai and McGinnis teaches the fireguard circuit of Claim 16.

Gershen et al. in view of Legatti and further in view of Fai and McGinnis does not teach that the power connections for the circuit opening device and the first and second SCRs are derived from the power and neutral lines at the power source.

McDonald, in Figure 7, teaches that power connections for a circuit opening device and an SCR are derived from power and neutral lines at the power source.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gershen et al. in view of Legatti and further in view of Fai and McGinnis with McDonald et al., as discussed above in Claim 4.

33. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gershen et al. in view of Legatti as applied to claim 1 above, and further in view of McDonald et al. as applied to Claim 21 above, and further in view of Neiger et al. (US 5,963,406).

34. With regard to Claim 23, Gershen et al. in view of Legatti as applied to claim 1 above, and further in view of McDonald et al. teaches the fireguard circuit of Claim 21.

Gershen et al. in view of Legatti as applied to claim 1 above, and further in view of McDonald et al. does not teach that the circuit-opening device is connected to the first SCR through the diode bridge.

Neiger et al., in Figure 5, teaches an arc fault detector with a circuit interrupter wherein the SCR (32) is connected to the circuit-opening device (30) through the diode bridge (20, 22, 24 & 26).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gershen et al. in view of Legatti as applied to claim 1 above, and further in view of McDonald et al. with Neiger et al., by placing the diode bridge, circuit-opening device and SCR configuration taught by McDonald with the configuration taught by Neiger et al. for the purpose of decoupling the SCR from the power line and preventing noise from triggering the SCR.

### ***Conclusion***

35. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Foster et al. (US 4,823,225) disclose a bipolar immersion detection circuit interrupter that comprises two SCR elements coupled to a solenoid for driving a circuit breaker to remove power from a load in the event of an overload.

36. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bauer whose telephone number is 571-272-5986. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SAB



**PHUONG T. VU**  
**PRIMARY EXAMINER**